**YO YO PHYSICS DIRECTIONS**

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| TOPIC | SPEED |
| HOW TO TEACH | Roll it one meter time how long it takes for it to travel. d/t |
| KEY POINTS | d/t meters, seconds |

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| TOPIC | ANGULAR MOTION |
| HOW TO TEACH | Time how long it takes to twirl it one time at full length compared to 1 time at half length |
| KEY POINTS | Degrees, circumference |

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| TOPIC | POTENTIAL ENERGY |
| HOW TO TEACH | Measure the mass of the yo yo, hold it in your hand above the ground and measure the distance. Calculate PE using mgh, repeat at different heights and with different YO YO |
| KEY POINTS | d/t meters, seconds |

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| TOPIC | NEWTONS THIRD LAW |
| HOW TO TEACH | Move the yo yo up and down discuss how when the string extends the force of gravity pulls down while the string pulls up. Opposite forces |
| KEY POINTS | Gravity, Opposites Forces, Action Reaction |